In the Claims:

Please cancel claims 34-43, 45, 47, 49, 51, 53, 55-59, 62-63, 70-71, 74-75, and 78-79. Please amend claims 44, 46, 48, 50, 52, 60-61, and 76. The claims are as follows:

1-33. (Canceled)

34-43. (Canceled)

44. (Currently amended) ~~The electrical structure of claim 43,~~ An electrical structure, comprising:

a resistor having a length L and an electrical resistance R(t) at a time t; and

a laser radiation directed onto a portion of the resistor, wherein the portion of the resistor includes a fraction F of the length L, wherein the laser radiation heats the portion of the resistor such that the electrical resistance R(t) instantaneously changes at a rate dR/dt, wherein the resistor is coupled to a semiconductor substrate,

wherein the resistor includes a layer of a first electrically conductive material coupled to a layer of a second electrically conductive material by a cell of a third electrically conductive material that is totally within the portion of the resistor, and wherein the third electrically conductive material includes a chemical combination of the first electrically conductive material and the second electrically conductive material, wherein the layer of the first electrically conductive material is totally within the portion of the resistor, wherein the layer of the second electrically conductive material is totally within the portion of the resistor, wherein a first bounding surface of the cell is in direct mechanical contact with the layer of the first electrically

conductive material, wherein a second bounding surface of the cell is in direct mechanical contact with the layer of the second electrically conductive material, wherein the first bounding surface of the cell is opposite to and parallel to the second bounding surface of the cell and wherein the third electrically conductive material is distributed throughout the cell,

wherein $dR/dt > 0$,

wherein the first electrically conductive material includes titanium, wherein the second electrically conductive material includes aluminum, and wherein the third electrically conductive material includes titanium trialuminide.

45. (Canceled)

46. (Currently amended) ~~The electrical structure of claim 45,~~ An electrical structure, comprising:

a resistor having a length L and an electrical resistance R(t) at a time t; and

a laser radiation directed onto a portion of the resistor, wherein the portion of the resistor includes a fraction F of the length L, wherein the laser radiation heats the portion of the resistor such that the electrical resistance R(t) instantaneously changes at a rate dR/dt, wherein the resistor is coupled to a semiconductor substrate,

wherein the resistor includes a layer of a first electrically conductive material coupled to a layer of a second electrically conductive material by a cell of a third electrically conductive material that is totally within the portion of the resistor, and wherein the third electrically conductive material includes a chemical combination of the first electrically conductive material and the second electrically conductive material, wherein the layer of the first electrically

conductive material is totally within the portion of the resistor, wherein the layer of the second electrically conductive material is totally within the portion of the resistor, wherein a first bounding surface of the cell is in direct mechanical contact with the layer of the first electrically conductive material, wherein a second bounding surface of the cell is in direct mechanical contact with the layer of the second electrically conductive material, wherein the first bounding surface of the cell is opposite to and parallel to the second bounding surface of the cell and wherein the third electrically conductive material is distributed throughout the cell,

wherein $dR/dt < 0$,

wherein the first electrically conductive material includes cobalt, wherein the second electrically conductive material includes silicon, and wherein the third electrically conductive material includes cobalt silicide.

47. (Canceled)

48. (Currently amended) ~~The electrical structure of claim 47,~~ An electrical structure, comprising:

a resistor having a length L and an electrical resistance R(t) at a time t; and

a laser radiation directed onto a portion of the resistor, wherein the portion of the resistor includes a fraction F of the length L, wherein the laser radiation heats the portion of the resistor such that the electrical resistance R(t) instantaneously changes at a rate dR/dt, wherein the resistor is coupled to a semiconductor substrate,

wherein the resistor comprises a first cell and a second cell, wherein the second cell is in direct mechanical contact with the first cell, wherein the first cell and the second cell are each

totally within the portion of the resistor, wherein the first cell comprises a first material that is distributed throughout the first cell, wherein the second cell comprises a second material that is distributed throughout the second cell, wherein the first cell does not comprise the second material, wherein the second cell does not comprise the first material, wherein the first material is the second material structurally changed by the laser radiation,

wherein the first material is an amorphous metallic material, wherein the second material is a crystalline metallic material, wherein the crystalline metallic material has resulted from an interaction of the laser radiation with the amorphous metallic material, and

wherein the amorphous metallic material is selected from the group consisting of titanium nitride, tantalum silicon nitride, and tungsten nitride.

49. (Canceled)

50. (Currently amended) ~~The electrical structure of claim 49,~~ An electrical structure, comprising:

a resistor having a length L and an electrical resistance R(t) at a time t; and

a laser radiation directed onto a portion of the resistor, wherein the portion of the resistor includes a fraction F of the length L, wherein the laser radiation heats the portion of the resistor such that the electrical resistance R(t) instantaneously changes at a rate dR/dt, wherein the resistor is coupled to a semiconductor substrate,

wherein the resistor comprises a first cell and a second cell, wherein the second cell is in direct mechanical contact with the first cell, wherein the first cell and the second cell are each totally within the portion of the resistor, wherein the first cell comprises a first material that is

distributed throughout the first cell, wherein the second cell comprises a second material that is distributed throughout the second cell, wherein the first cell does not comprise the second material, wherein the second cell does not comprise the first material, wherein the first material is the second material structurally changed by the laser radiation,

wherein the first material is a polycrystalline metal having a first crystalline phase, wherein the second material is a second crystalline phase of the polycrystalline metal, wherein the second phase of the polycrystalline metal has resulted from an interaction of the laser radiation with the first phase of the polycrystalline metal,

wherein the polycrystalline metal includes tantalum, wherein the first crystalline phase includes a tetragonal phase, and wherein the second crystalline phase includes a body-centered cubic phase.

51. (Canceled)

52. (Currently amended) ~~The electrical structure of claim 51,~~ An electrical structure, comprising:

a resistor having a length L and an electrical resistance R(t) at a time t; and

a laser radiation directed onto a portion of the resistor, wherein the portion of the resistor includes a fraction F of the length L, wherein the laser radiation heats the portion of the resistor such that the electrical resistance R(t) instantaneously changes at a rate dR/dt, wherein the resistor is coupled to a semiconductor substrate,

wherein the resistor comprises a first cell and a second cell, wherein the second cell is in direct mechanical contact with the first cell, wherein the first cell and the second cell are each

totally within the portion of the resistor, wherein the first cell comprises a first material that is distributed throughout the first cell, wherein the second cell comprises a second material that is distributed throughout the second cell, wherein the first cell does not comprise the second material, wherein the second cell does not comprise the first material, wherein the first material is the second material structurally changed by the laser radiation,

wherein the first material is a metallic oxide selected from the group consisting of a metal oxide and a metallic alloy oxide, wherein the second material is a metallic component, wherein the metallic component is a metal if the metallic oxide is the metal oxide, wherein the metallic component is a metallic alloy if the metallic oxide is the metallic alloy oxide, wherein the metallic component has resulted from an interaction of the laser radiation with the metallic oxide, and

wherein the metallic oxide is platinum oxide, palladium oxide, irridium oxide, or platinum palladium oxide.

53. (Canceled)

54. (Canceled)

55-59. (Canceled)

60. (Currently amended) ~~The electrical resistor of claim 59,~~ An electrical resistor of length L, comprising N layers denoted as layers 1, 2, ..., N:

wherein a portion of the resistor includes a fraction F of the length L;

wherein N is at least 2;

wherein layer I includes an electrically conductive material M_I for I=1, 2, ... , N;

wherein layer J is in electrically conductive contact with layer J+1 for J = 1, 2, ..., N-1;

wherein a cell $C_{K,K+1}$ couples a cell C_K' of the layer K to a cell C_{K+1}' of the layer K+1, wherein the cell C_K' is totally within the portion of the resistor and includes the material M_K, wherein the cell C_{K+1}' is totally within the portion of the resistor and includes the material M_{K+1}, wherein the cell $C_{K,K+1}$ is totally within the portion of the resistor and includes an electrically conductive material $M_{K,K+1}$ that comprises a chemical combination of the material M_K from the layer K and the material M_{K+1} from the layer K+1, wherein K is selected from the group consisting of 1, 2, ..., N-1, and combinations thereof,

wherein N =2,

wherein the electrically conductive material M_1 includes titanium, wherein the electrically conductive material M_2 includes aluminum, and wherein the electrically conductive material $M_{1,2}$ includes titanium trialuminide.

61. (Currently amended) ~~The electrical resistor of claim 59,~~ An electrical resistor of length L, comprising N layers denoted as layers 1, 2, ..., N:

wherein a portion of the resistor includes a fraction F of the length L;

wherein N is at least 2;

wherein layer I includes an electrically conductive material M_I for I=1, 2, ... , N;

wherein layer J is in electrically conductive contact with layer J+1 for J = 1, 2, ..., N-1;

wherein a cell $C_{K,K+1}$ couples a cell C_K' of the layer K to a cell C_{K+1}' of the layer K+1, wherein the cell C_K' is totally within the portion of the resistor and includes the material M_K, wherein the cell C_{K+1}' is totally within the portion of the resistor and includes the material M_{K+1}, wherein the cell $C_{K,K+1}$ is totally within the portion of the resistor and includes an electrically conductive material $M_{K,K+1}$ that comprises a chemical combination of the material M_K from the layer K and the material M_{K+1} from the layer K+1, wherein K is selected from the group consisting of 1, 2, ..., N-1, and combinations thereof,

wherein N =2,

wherein the electrically conductive material M_1 includes cobalt, wherein the electrically conductive material M_2 includes aluminum, and wherein the electrically conductive material $M_{1,2}$ includes cobalt silicide.

62-63. (Canceled)

64-69 (Canceled)

70-71. (Canceled)

72-73. (Canceled)

74-75. (Canceled)

76. (Currently amended) An electrical structure, comprising:

a resistor having a length L and an electrical resistance R(t) at a time t; and

a laser radiation directed onto a portion of the resistor, wherein the portion of the resistor includes a fraction F of the length L, and wherein the laser radiation heats the portion of the resistor such that the electrical resistance R(t) instantaneously changes at a rate dR/dt;

wherein:

the resistor includes a layer of a first electrically conductive material coupled to a layer of a second electrically conductive material by a cell of a third electrically conductive material that is within the portion of the resistor and the third electrically conductive material includes a chemical combination of the first electrically conductive material and the second electrically conductive material, such that either $dR/dt > 0$ and the first electrically conductive material includes titanium and the second electrically conductive material includes aluminum and the third electrically conductive material includes titanium trialuminide, or $dR/dt \leq 0$ and the first electrically conductive material includes cobalt and the second electrically conductive material includes silicon and the third electrically conductive material includes cobalt silicide; or

the resistor comprises an amorphous metallic material and a cell of the amorphous metallic material within the portion of the resistor is coupled to a cell of a crystalline metallic material within the portion of the resistor and the crystalline metallic material has resulted from an interaction of the laser radiation with the amorphous metallic material, said amorphous metallic material being selected from the group consisting of titanium nitride, tantalum silicon nitride, and tungsten nitride; or

the resistor comprises a polycrystalline metal having a first crystalline phase and a cell of the polycrystalline metal within the portion of the resistor is coupled to a cell of a second crystalline phase of the polycrystalline metal within the portion of the resistor and the second phase of the polycrystalline metal has resulted from an interaction of the laser radiation with the first phase of the polycrystalline metal, said polycrystalline metal including tantalum, said first crystalline phase including a tetragonal phase, said second crystalline phase including a body-centered cubic phase; or

the resistor comprises a metallic oxide selected from the group consisting of a metal oxide and a metallic alloy oxide, a cell of the metallic oxide within the portion of the resistor being coupled to a cell of a metallic component within the portion of the resistor, said metallic component being a metal if the metallic oxide is the metal oxide, said metallic component being a metallic alloy if the metallic oxide is the metallic alloy oxide, said metallic component having resulted from an interaction of the laser radiation with the metallic oxide.

78-79. (Canceled)

80. (Previously presented) An electrical resistor of length L, comprising N layers denoted as layers 1, 2, ..., N:

wherein a portion of the resistor includes a fraction F of the length L;

wherein N is at least 2;

wherein layer I includes an electrically conductive material M_I for I=1, 2, ... , N;

wherein layer J is in electrically conductive contact with layer J+1 for J = 1, 2, ..., N-1; and

wherein a cell $C_{K,K+1}$ couples a cell C_K' of the layer K to a cell C_{K+1}' of the layer K+1, wherein the cell C_K' is within the portion of the resistor and includes the material M_K, wherein the cell C_{K+1}' is within the portion of the resistor and includes the material M_{K+1}, wherein the cell $C_{K,K+1}$ is within the portion of the resistor and includes an electrically conductive material $M_{K,K+1}$ that comprises a chemical combination of the material M_K from the layer K and the material M_{K+1} from the layer K+1, and wherein K is selected from the group consisting of 1, 2, ..., N-1, and combinations thereof, wherein N =2;

wherein:

the electrically conductive material M_1 includes titanium and the electrically conductive material M_2 includes aluminum and the electrically conductive material $M_{1,2}$ includes titanium trialuminide; or

the electrically conductive material M_1 includes cobalt and the electrically conductive material M_2 includes aluminum and the electrically conductive material $M_{1,2}$ includes cobalt silicide.